

Thermocouple Process Calibrator

User's MANUAL

Safety Information

To avoid possible electric shock or personal injury:

- Never apply more than 30V between any two jacks, or between any jack and earth ground.
- Make sure the battery door is closed and latched before you operate the calibrator.
- Remove test leads from the calibrator before you open the battery door.
- Do not operate calibrator if it is damaged.
- Do not operate the calibrator around explosive gas, vapor, or dust.

To avoid possible damage the calibrator:

- Make sure choose the right jack and rang, before use the calibrator to measurement or calibrator.
- Take away the calibrator from the used circumstance, before operate the calibrator or after close the calibrator.

Introduction

Thermocouple Process Calibrator is a exactitude measurement and source handheld instrument, it can be use to calibrate the Thermocouple instrument.

Thermocouple Process Calibrator can measure or simulate 8 types of difference Thermocouple ($^{\circ}\text{C}$ or $^{\circ}\text{F}$), and measure or simulate the millivolt. But it could not use to measurement or source at a same time.

The accessories: 2 pcs Thermocouple plugs (no wire), 6 * AAA 1.5V battery, user's manual.

If the Calibrator is broken or short of some accessories, please contact the supplier.

The following table has showed the technical parameter and function of the Calibrator.

Specification

All the specification will under 1 year calibration cycle and temperature between 18~28°C, except addition explain.

Measure (input)/Simulate (output) Millivolt specification

INPUT/OUTPUT RANGE	RESOLUTION	ACCURACY
-10mV~75mV	0.01mV	± (0.025%+2counts)

Maximal input voltage: 30Vpp.

Measure (input)/Simulate (output) Thermocouple Specification

FUNCTION	RANGE	RESOLUTION	ACCURACY	REFERENCE JUNCTION ERROR
J TYPE	-200~1200°C / -328~2192°F	0.1°C/°F	± (0.3°C+10uV)	±0.3°C
K TYPE	-200~1370°C / -328~2498°F	0.1°C/°F	± (0.3°C+10uV)	±0.3°C
T TYPE	-200~400°C / -328 ~ 752°F	0.1°C/°F	± (0.3°C+10uV)	±0.3°C
E TYPE	-200~950°C / -328~1742°F	0.1°C/°F	± (0.3°C+10uV)	±0.3°C
R TYPE	-20~1750°C / -4~3182°F	1°C/°F	± (1°C+10uV)	±0.3°C
S TYPE	-20~1750°C/ -4~3182°F	1°C/°F	± (1°C+10uV)	±0.3°C
B TYPE	600~1800°C / 1112~3272°F	1°C/°F	± (1°C+10uV)	±0.3°C

N TYPE	-250~1300°C / -418~2372°F	0.1°C/°F	± (0.3°C+10uV)	±0.3°C
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Maximal input voltage: 30Vpp.

General Specifications:

Maximum voltage applied between any jack and earth ground or between any two jack: 30V

Storage temperature: -40°C~60°C

Operating temperature: 0°C~50°C

Operating altitude: 3000 meters maximum

Temperature coefficient: ±0.02%/°C on 0°C~18°C and 28°C~50°C

Relative humidity: 95% up to 30°C, 75% up to 40°C, 45% up to 50°C

Shock: Random 2g, 5Hz to 500Hz





Safety: 1 meter drop test

Power requirements: 6 x AAA 1.5V Battery

Size: 205mm×98mm×46mm

Weight: 472 g (include battery)

International Symbols

Symbol	Meaning
	Earth ground
	Conforms to European Union directives
	Refer to this instruction sheet for information about this feature.
	Battery

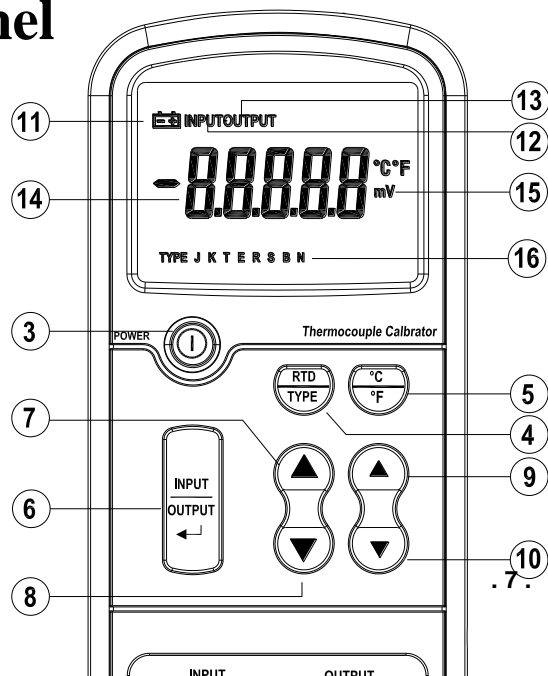


Double insulation

Explanation on Front Panel

The front panel is show as in right figure:

1. Input jack
2. Output jack
3. Power key
4. Mode key
5. °C/°F key
6. Input/output key
7. Increase more value key
8. Reduce more value key
9. Increase less value key
10. Reduce less value key

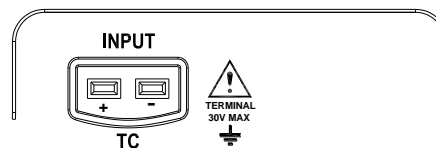
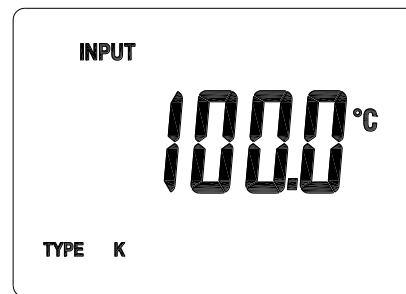


11. Low power indication
12. Input state indication
13. Output state indication
14. Reading value
15. Unit indication
16. Mode indication

Operation Instructions

Thermocouple or Millivolt measurement/input

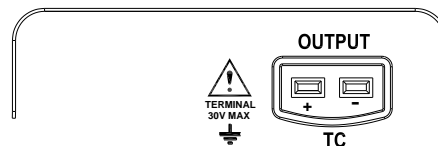
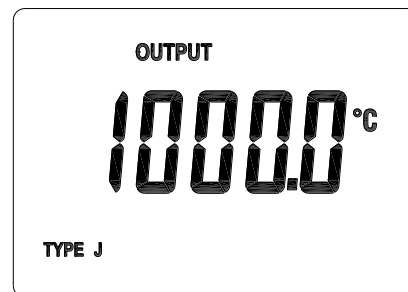
- ① Press the power key³, turn on the calibrator.
- ② Press the Input/output key⁶, When on the input mode.
- ③ Press mode key⁴, on the measure type you want.
- ④ Put the measure thermocouple or millivolt source into the input jack¹.
- ⑤ Get the reading value¹⁴.



* The number in the , referring to the “Explanation on Front Panel” (Page7)

Thermocouple or Millivolt Simulate/output

- ① Press the power key , turn on the calibrator.
- ② Press the Input/output key , When on the output mode.
- ③ Press mode key , on the measure type you want.
- ④ Press the adjust value key to let the value on your need.
- ⑤ Put the thermocouple instrument or voltage meter into the output jack .
- ⑥ If you want to change the output value, then press the adjust value key or change to other thermocouple type use the mode key .



* The number in the □, referring to the “Explanation on Front Panel” (Page7)

Maintenance


Cleaning

Periodically wipe the case with a damp cloth and detergent; do not use abrasives or solvents.

Calibration

Calibrate your calibrator once a year to ensure that it performs according to its specifications.

Replacing the Battery

Please change the battery when the LCD indicates  .

Turn off the power of the Calibrator, When you change the battery, and screw off the breechblock on the battery cabinet cover, then take off it and instead the fresh AAA 1.5V battery.

Connect wire

Use the accessories thermocouple plug to make the difference plug connect wire **which** you want.

